

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 24-47 are pending in the present application, Claims 24 and 47 having been amended by way of the present amendment.

Support for the amendments to Claims 24 and 47 are found in the specification, for example at page 24, lines 23-30. Therefore no new matter is added.

In the outstanding Office Action, Claims 24-40 and 43-47 were rejected under 35 U.S.C. §103(a) as unpatentable over Zinky et al. (U.S. Patent No. 6,480,879, hereinafter Zinky) in view of Mei et al. (U.S. Patent No. 6,816,907, hereinafter Mei); and Claims 41 and 42 were rejected over Zinky in view of Mei and in further view of Cardei (“Hierarchical Architecture for Real-Time Adaptive Resource Management”).

In reply, Claim 24, for example, is directed to a program that configures an application programming interface as a data model describing quality of service contracts and quality of service adaptation paths as specified by quality of service aware mobile multimedia applications using the application programming interface. This configuration is established so as to manage quality of service and mobility-aware for managing network connections with other applications. The quality of service adaptation path defines an adaptation policy identifying quality of service specifications and allows quality of service changes. Middleware is adapted to negotiate with communication peers to generate adaptation paths by having a specific adaptation path proposed by an initiator of communication peers being validated by each of the other communication peers against its own adaptation policies, and having each of the other communication peers respond with a counter offer that is limited to a definition of a subset of the specific adaptation path proposed by the initiator.

Turning now to the rejection of Claims 24-40 and 43-47 under §103(a) as unpatentable over Zinky and Mei, that rejection is traversed.

Claim 24 recites, in part,

wherein said middleware is adapted
to negotiate with communication peers to generate
adaptation paths by having a specific adaptation path proposed
by an initiator of communication peers being validated by each
of the other communication peers against its own adaptation
policies, and having each of said other communication peers
respond with a counter offer that is limited to a definition of a
subset of the specific adaptation path proposed by said initiator,
to measure the actual quality-of-service, and
to solve any quality-of-service problem by deciding
which of the possible adaptations to perform.

Claim 47 recites similar features.

The outstanding action admits on page 3, in item 3 that “Zinky does not explicitly teach where the middleware is adapted to negotiate with communication peers.” However, the outstanding Action relies on Mei as curing this deficiency in Zinky.

Mei discloses a server which serves customer requests based on service level tables and resource requirement tables, whereby the service level tables comprise priorities (called service levels) assigned by content providers to customers¹ and the resource requirement tables define a minimum set of resources assigned to a given service level.² Further, Mei describes that a server comprises a request dispatcher, which places an incoming request into one of a plurality of service queues based on the assigned service levels. If no resources are available, the request dispatcher forwards the incoming request to an overflow handler,³ which may “initiate a dialogue between the parties involved in order to facilitate negotiation.”⁴

¹ Mei, col. 3, lines 5-9.

² Mei, claims 17, 32.

³ Mei, col. 5, lines 25-32.

⁴ Mei, col. 7 lines 26-31.

Besides “requesting other users to give up their currently allocated services and to receive some type of ‘credit’ in return for doing so,” which lacks any resemblance with the specific negotiation recited in Claim 24 (in the independent claims, before negotiation, a user has not allocated any services), Mei does not disclose any detail concerning what is negotiated and how negotiation is accomplished.

The initiator of the communication peers recited in Claim 24 must be seen as the user sending a request as described in Mei. However, such user does not propose an adaptation path; instead the user is serviced according to the service level that the content provider has assigned to the user.

In the independent claims, a negotiated adaptation path “defines an adaptation policy identifying quality-of-service specifications and allows quality-of-service changes.”

Thus, hypothetical changes to quality-of-service specifications are negotiated, in other words, changes to quality-of-service specifications are negotiated independently of the actual need of such changes and are negotiated even though they may never apply.

If negotiation were performed only upon actual need, it would not make sense to negotiate both quality-of-service specifications and quality-of-service changes. For example, the feature “to solve any quality-of-service problem by deciding which of possible adaptations to perform,” shows that the adaptation paths are negotiated before any quality-of-service problem arises.

In contrast, Mei proposes to negotiate only in case of an actual need to do so, namely, in case of unavailability of server resources, as was discussed above.

The outstanding Office Action, on page 3, in item 8 cites col. 7, lines 41-44 of Mei as disclosing adaptation paths defining an adaptation policy allowing quality-of service changes. This portion of Mei, however, describes actions taken for the maintenance of a given level of

quality-of-service (or “service level” as it is called in Mei) provided to a user, and not for changes from one quality-of-service level to another, which has just the opposite effect.

Claim 24 states that the other communication peers respond with a “counter offer that is limited to a definition of a subset of the specific adaptation path proposed by the initiator.”

However Mei does not describe or suggest disclosing a counter offer that is a subset of a given adaptation path. Thus, as discussed above, it can be clearly seen that Mei does not disclose any detail concerning what is negotiated and how negotiation is accomplished.

Thus, in order to render obvious the invention of Claim 24 for example, all of the elements of Claim 24 must be taught or suggested in the asserted references. However, neither Zinky nor Mei disclose that middleware is adapted to negotiate with communication peers to generate adaptation paths by having a specific adaptation path proposed by an initiator of communication peers being validated by each of the other communication peers against its own adaptation policies.

Thus, no matter how Zinky and Mei are combined, the combination does not teach or suggest all of the elements of Claim 24 and therefore does not render obvious the invention of Claim 24.

Accordingly, Applicants respectfully submit that Claim 24, Claim 47 and claims depending therefrom patently distinguish over Zinky and Mei considered individually or in any proper combination.

Moreover, with respect to the further dependent claims 41 and 42, in light of the above discussion, Applicant respectfully submits that those claims also distinguish over the applied art, particularly as the further cited teaching to Cardei is not believed to overcome the above-noted deficiencies of Zinky and Mei.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 24-47, as amended, is patentably distinguishing over the prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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